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REPORT

to

HIS EXCELLENCY

HON. ALBERT C. RITCHIE

Governor of Maryland.

With Respect to the Proposed
State-Owned Ferry
Between the Eastern and Western Shores
of the Chesapeake Bay.

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Report prepared by

EZRA B. WHITMAN, Chairman,
Public Service Commission of Maryland,
and

JOHN N. MACKALL, Chairman,
State Roads Commission of Maryland.

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March 15th, 1924.

HONORABLE ALBERT C. RITCHIE,
GOVERNOR OF MARYLAND,
ANNAPOLIS, MARYLAND.

Dear Sir:

In accordance with your request, we have investigated the question of a State-owned ferry between the Eastern and Western Shores of the Chesapeake Bay and beg herewith to submit our report on this subject.

HISTORY

Independent steamboat lines were established on the Chesapeake Bay operating out of Baltimore City and connecting with a number of wharves located on the principal river of both the Eastern and Western Shores. These lines originally made no rail connections. The Pennsylvania Railroad established several rail lines running in the general direction north-east to south-west. These lines probably were built primarily to connect with and to feed the main line of the Delaware Division of the Philadelphia, Baltimore & Washington Railroad, running from Wilmington to Delmar, at which point it connects with the New York, Philadelphia & Norfolk Railroad, a subsidiary of the Pennsylvania Railroad, running south from that point to Cape Charles, and connecting with Norfolk by car-float.

Two independent railroad lines were started, crossing the Maryland-Delaware peninsula. The northern-most line was Queen Anne's Railroad, opened between Queenstown and Lewes, Del., in 1898, and in 1902 extended from Queenstown to Love Point, with a branch from Queenstown to Centreville. After various foreclosure proceedings, this railroad, together with several steamboats lines, was acquired by the Pennsylvania Railroad interests in 1905, and the Maryland, Delaware and Virginia Railroad Company formed.

The property of this company was sold in 1923 under foreclosure proceedings, most of the same being re-acquired by the Pennsylvania Railroad interests.

The second railroad, originally the Wicomico and Pocomoke Railroad, passed through several re-organizations and in 1890 became a part of the Baltimore and Eastern Shore Railroad Company, extending from Claiborne to Ocean City. This line was acquired by the Pennsylvania Railroad in 1894 and was combined with various steamboat lines to form the Baltimore, Chesapeake and Atlantic Railway Company. Both of these railway lines have steamer connections with Baltimore.

When the Pennsylvania Railroad took over the first of these lines, about thirty years ago, Baltimore was one of the principal markets for the farm products of the Eastern Shore, and the steamboat lines had been prosperous and made money for their former owners. The very fact that a great proportion of the products from the Eastern Shore came to Baltimore often produced a glut in the Baltimore market and it was often impossible for the farmers to secure much more money for their products than was required to pay the freight.

Several important co-operative marketing associations have been organized by the farmers of the Eastern Shore, through which associations quotations are secured by telegraph on the various farm and trucking products from all over the country from west of the Mississippi River to New England. The members of the association are able to sell in the markets offering the highest prices and the garden, truck and other farm products raised on the Eastern Shore are now marketed from New England to the Mississippi River. The natural way for this produce to be distributed is northernward through Wilmington and Philadelphia.

Philadelphia itself as a rule is a higher price market than Baltimore and naturally more of the Eastern Shore products make their way to Philadelphia than to Baltimore under these conditions of marketing. In addition to this the

northern merchants send their buyers into the various cities on the Eastern Shore, and pay spot cash for produce delivered at the freight yards. Baltimore merchants have never seen fit to buy this way for the Baltimore market, but simply take what the Eastern Shore farmers choose to send them.

Baltimore is in close proximity to the fertile truck, garden and agricultural counties of Anne Arundel, Howard, Baltimore and Harford. From these counties their products are readily brought by wagon or automobile into the city. Practically all the needs or at least the greater part of the needs of Baltimore can be and are supplied in this way. Any large quantities of produce sent from the Eastern Shore merely tends to glut the market and reduce prices.

The freight that is shipped from the Eastern shore to the north and west can be loaded on a train and shipped to its destination as far away as Denver without rehandling. It would be foolish to put this on a train, unload it onto a boat on the east side of the Bay and then unload it from the boat again in Baltimore probably to trucks or possibly directly into the train. This would require the freight to be handled at least two or three time more than is necessary, greatly increasing the possibility of damage, and also delaying unnecessarily shipments which are largely perishable products. The seafoods and ripened fruits which are shipped must be kept cold and can be put directly in refrigerating cars and shipped northward.

Owing to natural economic conditions Baltimore will never be the point to which the greater part of the produce of the Eastern Shore will be shipped. It has been the favorite pastime of Baltimoreans to rail at the Pennsylvania Railroad for diverting traffic from Baltimore to Philadelphia. We feel that it is the natural economic conditions which cause most of the products of the Eastern Shore to flow northward through Wilmington and Philadelphia rather than across the Bay to Baltimore.

With respect to the passenger traffic we feel that the railroad schedules undoubtedly favor the carrying of passengers northward to Wilmington and Philadelphia rather than to Baltimore. From almost any point on the Eastern Shore it is possible to reach Philadelphia, spend four or five hours in the city shopping and then return home the same night. From practically no point on the Eastern Shore can Baltimore be reached at an hour which will enable the passenger to spend four or five hours in Baltimore and return to his home the same night. This, however, is not due so much to discriminatory schedules of the Pennsylvania Railroad, as it is due to geographical conditions and the lack of traffic between Baltimore and the Eastern Shore.

The M., D. & V. train as formerly operated left Lewes, Delaware, about 5.30 or 6.00 o'clock in the morning, which is about as early as you can expect passengers to take the train. After crossing Delaware and Maryland, Love Point is reached at such a late hour in the morning that the boat does not dock in Baltimore until 12.00 or 1.00 o'clock. The same thing is true on the B., C. & A. with trains leaving Ocean City and arriving at Claiborne. In order that passengers for points on the eastern ends of these lines may reach their destinations at a reasonable hour the boats must leave Baltimore so early that at the most only two or three hours can be spent in the city.

If the traffic were heavy enough to justify it a train could be started on the M., D. & V. from Denton and on the B., C. & A. from Salisbury about 6.00 o'clock in the morning and the boats could then reach Baltimore about 9.00 or 10.00 o'clock. A second boat could leave several hours later when the train finally came through from Lewes or Ocean City. There has never been sufficient traffic, however, to justify such a schedule and to have operated on this schedule would merely increase the losses to the two railroads.

To sum up the situation as we see it, we believe that Baltimore can never expect the Eastern Shore to ship any large proportion of its products to it, because Baltimore cannot

compete in price with the higher priced markets of the north and west. The Eastern Shore farmer is prosperous because of the high prices paid for his products in the northern and western markets. and the Eastern Shore merchant is prosperous because the farmers are prosperous. Both farmers and merchants, not to mention the manufacturer and canners, have money to spend. Their friends and relations live in Baltimore. Their pride and affection for their own State and long dealing with Baltimore merchants would naturally make them prefer to come to Baltimore.

Then why does the Eastern Shoreman go to Wilmington or Philadelphia? Baltimore for most things is a cheaper market in which to buy. But it is easier and more convenient to go to Wilmington and Philadelphia than Baltimore, and for this reason much of the money which comes from the north and west to the Eastern Shore goes to the north and not to Baltimore.

How can the Eastern Shoreman be induced to spend his money in Baltimore? The answer to his question in our opinion is to make it convenient and easy for him to reach Baltimore and return home the same day, and, also to make it easy for the Baltimore merchant to promptly and readily get his goods to the Eastern Shore buyers. And this we believe can be accomplished best by means of a ferry across the Bay operating at frequent intervals, with the Western terminal connected by good roads with Baltimore, Annapolis and Washington and the eastern terminal connected by good roads with the two main north and south roads of the Eastern Shore of Maryland and the two main north and south roads of the State of Delaware in the lower part of that State. In other words the Eastern Shoreman would sell his products in the highest markets and the ferry would enable him to buy conveniently in the lowest market in Baltimore.

In 1919, following the termination of the war, the need for better connections between the Eastern Shore and the Western Shore was recognized by the State and it was sought

to establish a State ferry between Annapolis and Claiborne. It was found, however, that the project would cost more than there were funds available. When private individuals offered to establish this ferry, the State agreed to pay them a subsidy for running it of \$1,000 a mile. This subsidy was based on the principle that the ferry became a part of the State road system and the \$1,000 a mile was at that time the amount required to keep up and maintain a mile of State road. A second ferry was established between Bay Shore and Rock Hall and this line was also subsidized by this State at \$1,000 a mile for the length of its run.

A third ferry was also established between Baltimore and Love Point. This ferry, after building a pier at Love Point and hiring a boat to operate for a short time, met with financial difficulties and was sold out to the Rock Hall-Bay Shore interests, which re-established it between Bay Shore and Queenstown and during the past year the subsidy has been paid by the State to this ferry. The vicissitudes of these ferry lines have been many and numerous and need not be dwelt upon in this report other than to say that in spite of them the traffic on the lines has grown so that roughly speaking it might be said that the revenue almost equals the cost of operation and interest on the capital expended. A fuller discussion of the revenues and cost of operating these ferry lines will be taken up and discussed in a later part of this report.

DEVELOPMENT OF FERRY TRAFFIC

The key to the success of any ferry project is the solution of the problem of how to bring a large volume of traffic to use ferries. We believe that the secret of this problem was found by one of the large railroad companies operating a ferry service in the neighborhood of New York City. One ferry boat was being run with long intervals between trips and was constantly losing money. A second boat was held as a standby. The company was seriously considering the abandonment of this ferry service. One of the officials, however,

suggested that they run the two boats continuously and see what the effect would be. The two boats were put on and in a very few months the deficit which occurred when only one boat operated, was wiped out and the company made money. The traffic has increased to such an extent that a third boat has been ordered to be placed on this line.

We do not consider that any of the so-called ferry lines across the bay are properly named. We feel that they are steamboat lines, and, that any line that operates only two or three round trips a day over a distance of from 15 to 25 miles and charges from \$2.50 to \$5.00 to carry an automobile, cannot be considered a ferry line. We believe that a ferry line should be operated so that a passenger or an automobile, can leave for the ferry at any time he chooses, knowing that he will have a comparatively short time to wait for a boat even though one is just missed. Even with the longest possible wait he should be able to reach his destination more quickly than he could by any other route. The fare on such a ferry should also be so small that it can be taken advantage of by rich and poor alike, and not only taken advantage of occasionally, but repeatedly without any serious drain on the pocketbook. The rates on the present ferries are such that there is little or no saving in money by using the ferries as compared with going around the head of the Bay and over the Havre de Grace Bridge.

If such a ferry service as this can be established we feel that the solution of the problem of satisfactory communication between the Eastern Shore and the Western Shore of Maryland will have been solved and that the present traffic now carried by the existing ferries and the steamboat lines will multiply many times in the course of a very few years.

LOCATION OF FERRY

In studying the location of a high frequency, moderate price ferry, we have only to consider the length of the existing Annapolis-Claiborne Ferry, Bay Shore-Rock Hall Ferry and the Bay Shore-Queenstown Ferry to realize that fre-

quency of service can only be secured by a multiplication of boats which also means a multiplication of the operating expenses. A route from Bay Shore to Tolchester would be shorter than any of the existing routes but this route would be ten miles in length and would land you on the east side of the Bay, well above the center of population of the Eastern Shore. The ferry would be of little use north of the Sassafras River as the Havre de Grace bridge would enable one to reach this part of the Eastern Shore with comparatively little detour and the Sassafras River is only about 10 miles north of Tolchester.

Another location for the ferry which has been suggested to us is a point on the mainland north of Gibson's Island to Love Point. The length of this route would be between eight and nine miles and the shallow water off the Western Shore for a long distance before the channel is reached would call for either extensive dredging or the building of a very long pier to establish the western terminal.

The shortest distance between the eastern and the western shores is between Sandy Point on the Western Shore located between the Magothy and Severn Rivers, and a point on Kent Island in the neighborhood of Stevensville. The actual distance between these two shores is approximately 4 1/4 miles. The distance of Sandy Point from Baltimore would be about the same as the distance from Baltimore to Annapolis and there is already about one mile of road built in from the Annapolis Boulevard toward Sandy Point, leaving approximately only four miles of road to be built on the western side of the bay to reach a new terminal.

On the Eastern Shore four miles of the State road between Stevensville and Queenstown have been constructed and the most expensive part of the road yet remains to be built.

• Queenstown is 15 miles south of Tolchester and much nearer the center of population of the Eastern Shore.

In order to provide greater accessibility to the ferry from all points on the Eastern Shore a new State road should be

built from Queenstown to Wye Mills and Denton. Part of the road between Wye Mills and Denton has already been constructed. There are four main highways running north and south on the Eastern Shore peninsula, two of these being in Maryland and two of them in Delaware. The road above suggested with the roads that have already been constructed in Maryland and Delaware would cross all four of these main highways and be a direct feeder from these four highways to the ferry, and it is our opinion that if the ferry is built, this east and west road should be constructed in order to make the ferry of the greatest value.

RAILROAD CONNECTIONS

We have interviewed representatives of the W., B. & A. Railroad in regard to providing a connection between their railroad and the western ferry terminal at Sandy Point. The railroad company officials have assured us that if such a ferry is established the W., B. & A. Railway will provide ample means to handle the passenger traffic between the terminal and the nearest W., B. & A. Railroad station. In the beginning the passenger traffic would be handled by means of busses operating over the improved road. If the traffic grows to such an extent as to warrant the expenditure, a spur track will be built into the terminal from the W., B. & A. Railroad.

We also interviewed a representative of the Pennsylvania Railroad and discussed the possibility of making the eastern terminal of the ferry also the terminal of the old M., D. & V. Railroad, now the Baltimore and Eastern Railroad Company instead of having this terminal at Love Point as at present.

The dock at this eastern terminal could be built for the combined use of the Baltimore and Eastern Railroad Company and the ferry. By building about one mile of track the dock could be connected up with the existing railroad tracks at Stevensville. With a common terminal of both the ferry and the railroad line, both passenger and freight traf-

fic could be handled more advantageously than would be possible by the separate terminals, one for the railroad at Love Point and the other for the ferry near Stevensville. The railroad line would also be between two and three miles shorter than if Love Point should be maintained as the terminal. Passengers could then leave Baltimore on the W., B. & A. Railroad and be carried by the ferry across the Bay and connect with the Baltimore and Eastern Railroad directly at the ferry wharf and then reach any point on the Eastern Shore where the railroad operates.

It is our belief that the establishment of this ferry would not hurt the Baltimore and Eastern Railroad as it is now operated. In time the population of the Eastern Shore would be increased by the ferry more than would be possible by any other agency, and in the end the railroad line would be a considerable gainer because of the existence of the proposed ferry. We feel that no steps should be taken which would in any way injure the railroad or be a cause for the discontinuance of any of the railway service.

EXISTING FERRIES

With regard to the existing ferries, we do not believe that there is any chance that either of the two companies could continue to operate if a State ferry is established over a short water route with frequent trips. The State by granting subsidies to these existing companies has encouraged them and kept them alive through the vicissitudes of the pioneer stages and the following table shows the growth of business.

	Number of Passengers			Number of Automobiles		
	1921	1922	1923	1921	1922	1923
Bay Shore-Rock Hall	55,219	64,678	64,585	12,282	15,245	18,620
Annapolis-Claiborne	79,474	96,888	110,523	15,616	17,824	22,536

From the above table it will be seen that there has been a steady growth of traffic for both ferries and the owners of these existing ferry lines could reasonably expect that

both lines within a few years would be self-sustaining even without the State subsidy. With the development and growth naturally to be expected, they should be capable of earning in the not distant future a fair return on a fair value of the property used and useful in the public service.

It is our opinion that the State could not ignore the effect a State ferry would have on the existing ferries, but that the only fair thing to do would be to purchase the property of the two ferry companies, provided of course that there is no attempt made to put an exorbitant or excessive value on these properties. In purchasing these companies the State would be following the same fair policy that Baltimore City followed in purchasing the private water companies which were operating in the newly annexed territory at the time of annexation.

We do not believe that a valuation of the property of the ferry companies should be made until the State has definitely decided to purchase. The value of these companies as of today may be very different from their value several years in the future. As a basis for estimating the amount of money required by the State we have taken the book value of the ferry companies as submitted in the reports to the Public Service Commission. These are as follows:

FIXED CAPITAL

CLAIBORNE-ANNAPOLIS FERRY, INCORPORATED.

Wharf property	\$ 750.63
Steam Boats (new boats at \$55,000 added to 1922 Report)	247,234.69
Marine equipment	2,155.15
Furniture and fixtures on steamers	3,132.31
Electric Light Plant, Claiborne, Maryland	737.82
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	\$254,010.60

BALTIMORE & EASTERN SHORE FERRY LINE,
INCORPORATED.

Pier at Bay Shore	\$154,981.48
Pier at Rock Hall	85,225.96
Real Estate at Rock Hall	31,096.94
Roads at Bay Shore and Rock Hall	10,046.03
Repairs and additions to Terminal Property	917.83
Riparian Rights and Rights of Way	37,000.00
Automobiles	799.88
Water supply at Rock Hall	13,873.26
Office equipment	917.83
Lifting Devices	11,222.35
Ferry Boats	353,271.60
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	\$699,353.16

COST OF STATE FERRY PROJECT

We have estimated the cost of the construction of both the roads, terminals and required equipment to be as follows:

Roads—Western Shore	\$ 160,000
Roads—Eastern Shore to Denton, including causeway and bridge over narrows	1,170,000
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Total for Roads	\$1,330,000
Terminals with Piers 1,000 ft. in length having 22 ft. roadways and 5 ft. sidewalks, 50 ft. concourses and 80 ft. head houses, hinged aprons and ferry slips, channels, dredged to a depth of 12 ft. and protecting stone break-water on north side of each channel and ferry slips	750,000
2—New Ferry Boats	500,000
Working capital and deficit in early operations	100,000
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	\$2,680,000

Assuming a value of the property of the two existing ferries to be as given in the reports of these companies to the Public Service Commission, \$950,000 should be added to this cost, which would then make a total required to acquire the ferries and construct the roads and terminals of \$3,630,000.

ESTIMATED REVENUES AND EXPENSES

Rates.

Before any estimate of revenues can be made the rates to be charged by the ferry must be fixed. In our opinion the average rate for automobiles of all kinds should be one dollar, and the rate for a passenger should be twenty-five cents. If the traffic should develop so that a profit is earned above operating expenses and fixed charges, then the rates might be reduced as soon as this condition is reached.

Existing Traffic.

The following table shows the traffic now carried by the existing ferries, Havre de Grace Bridge and a number of the main roads of the State leading to Baltimore, annually:

Bay Shore-Rock Hall Ferry.....	Automobiles	18,620
	Passengers	64,585
Annapolis-Claiborne Ferry.....	Automobiles	22,536
	Passengers	110,523
Havre de Grace Bridge.....	Automobiles	220,000
Bel Air Road at Overlea.....	"	1,412,000
Annapolis Boulevard at Brooklyn.....	"	953,000
Reisterstown Road at Pikesville.....	"	943,000
Washington Boulevard at St. Denis.....	"	1,008,000
Frederick Road at Catonsville.....	"	1,204,000
York Road at Towson.....	"	1,167,000

Estimated Revenue.

With these figures as a guide and assuming that the new State ferry would carry as many passengers and automobiles as the two private ferry companies, the revenue would be as follows:

Automobiles— 41,250 @ \$1.00	\$41,250
Passengers —175,000 @ 0.25	43,750
Total	\$85,000

In our opinion the first full year of operation should yield an income of not less than \$70,000 and probably not more than \$100,000. We believe that in from five to ten years the traffic of the ferry will be as great as is that over the Havre de Grace Bridge at the present time. While a great deal of through traffic between Baltimore and Philadelphia is handled over this bridge, it is paralleled by a free bridge just a few miles north at Conowingo. Assuming that the ratio of passengers to automobiles will be about the same at the end of five or ten years that it is at the present time with the existing ferries, the revenue from the State ferry with a traffic equal to that of the Havre de Grace Bridge during 1923 would be as follows:

Automobiles—220,000 @ \$1.00	\$220,000
Passengers —840,000 @ 0.25	210,000
Total	\$430,000

Operating Charges.

The costs per mile for the operation of the boats of the Bay Shore-Rock Hall Ferry during 1923 were \$1.835, exclusive of interest, taxes and depreciation. During 1922 the operating expenses of the same ferry company were \$65,882. The operating expenses of the Annapolis-Claiborne Ferry for the same year were \$89,532.

We have estimated that two new boats could be operated at a cost of \$2.00 per mile. With the length of the water trip five miles and eighteen round trips being made each day, the cost of operation per day would be \$360. For one year the cost of operation would be \$131,400.

We have estimated that the cost of maintenance of the terminals will be \$6,000 per year, giving an operating

charge of \$137,400 per year. No charge is made for depreciation as a sinking fund based on fifteen year bonds is provided.

Fixed Charges.

We have figured the fixed charges, first assuming that the property of the two ferry companies will not be purchased by the State and, second, on the assumption that they will be purchased at their book value heretofore given. With interest at $4\frac{1}{2}\%$ and the life of the bonds fifteen years, the total annual interest and sinking fund charges will be 11% on \$2,680,000 under the first assumption and on \$3,630,000 on the second assumption.

The diagram submitted with this report shows graphically the estimated income from year to year based upon the assumption that sinking fund, interest and operating charges of \$432,200 (not including purchase of Ferry Companies) can be met; this will be the case when the traffic reaches approximately that over the Havre de Grace Bridge during 1923.

	Revenue	
	Minimum	Maximum
1st year.....	\$ 70,000	\$100,000
2nd year.....	110,000	183,000
3rd year.....	150,000	266,000
4th year.....	190,000	349,000
5th year.....	231,000	432,200
6th year.....	271,000	495,000
7th year.....	311,000	525,000
8th year.....	352,000	
9th year.....	392,000	
10th year.....	432,200	
11th year.....	472,000	
12th year.....	512,000	
13th year.....	552,000	

The following table shows the expenses for the State ferry with and without the purchase of the private companies :

	Without Purchase	With Purchase
Operating Charges.....	\$137,400	\$137,400
Interest	120,600	163,350
Operating Charges and Interest.....	258,000	300,750
Sinking Fund	174,200	235,550
Sinking Fund, Interest and Operating Charges	432,200	536,300

With these two tables showing the estimated revenues for thirteen years, and the estimated operating expenses and fixed charges, the following conclusions are evident on the assumptions made :

- (1) Operating expenses on the maximum basis would be paid at the end of the second year and on the minimum basis at the end of the third year.
- (2) Operating expenses and interest charges would be paid without the purchase of the ferries on the maximum basis by the end of the third year and with the purchase of the ferries by the end of the fourth year. On the minimum basis these charges would be paid without the purchase at the end of the sixth year and with the purchase at the end of the seventh year.
- (3) Operating expenses, interest and sinking fund charges would be paid without the purchase on the maximum basis at the end of the fifth year, and with the purchase of the ferries by the end of the eighth year. On the minimum basis these charges would be paid without the purchase at the end of the tenth year and with the purchase at the end of the thirteenth year.

The figures herein given are based upon the best available data and charts, and are believed to be ample to cover the cost of the work. The estimates of the traffic are based on our best judgment, in the light of the available traffic data.

Respectfully submitted,

EZRA B. WHITMAN.

JOHN N. MACKALL.

